TECHNICAL BOOK REVIEW INDEX

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JULIA C. WALLACE, *Editor*

Volume 17 **October, 1951** **Number 8**

THE purpose of the Technical Book Review Index is primarily to identify reviews in current scientific, technical, and trade journals; secondarily, when feasible, to quote from these reviews. In the evaluation of scientific and technical books, reviews, constitute the best existing source of information. The service of the Technical Book Review Index is thus in the field of evaluation, rather than in competition with existing publications which announce new and forthcoming books, list books by subjects, or supply bibliographic information. Each quotation immediately follows the name of the journal from which it is taken. Obviously, these brief extracts, detached from the context, must not be accepted as conclusive. Except for the correction of obvious errors, the bibliographic information is as given in the reviews. It is, therefore, in many cases incomplete and in some cases probably inaccurate.

Abbott, W. Practical geometry and engineering graphics. 326p. 1951. Blackie, London, 16s. 6d. net.

Mechanical world, June 22, 1951, p.585. ⅜ col.

"Requires some prior knowledge in elementary plane geometry, graph plotting, and the use of vectors. To that extent it is not hindered by very elementary material and the author has been enabled to present his arguments and descriptions with a systematic clarity that is not often encountered. Wherever one opens the book, what meets the eye is complete, illustrations and text all being related."

Adkins, Bernard, & Gibbs, W. J. Polyphase commutator machines. 230p. 1951. Cambridge Univ. Press, London, 21s. net.

Electrical manufacturing, Aug. 1951, p.220. ⅛ col.

"Written for those interested in the application of polyphase commutator machines, which are modifications of induction motors with speed and power factor controlled by applying external voltage to the secondary circuit."

Electrical times, Aug. 2, 1951, p.215. ⅛ col.

Electrician, Aug. 31, 1951, p.627. ¼ col.

"Deals with the subject of polyphase commutator machines from a practical point of view and describes for each type of machine the most important methods of control and the characteristics obtained . . . Also covers the theoretical side, but differs from most works in that the practical and theoretical are so arranged that the reader more interested in the former can avoid the latter without any undue effort on his part."

Mechanical world, July 13, 1951, p.30. ¾ col.

"Written by designers for engineers and students interested in the subject, and from a practical point of view. Each type of machine is described in conjunction with the most important methods of control and the characteristics obtained. A useful arrangement is the separation of the theory from the rest of the text so that the book can as readily be used for finding out what a machine will do as for learning how it works."

Allen, Charles F. H. Six-membered heterocyclic nitrogen compounds with four condensed rings. 345p. 1951. Interscience Publishers, New York, $10.

Chemical and engineering news, Sept. 24, 1951, p.4016. ½ col.

"Consists of a thorough index and a comprehensive coverage of the literature of the field through 1950 . . . Contains very few printing errors, and is well bound and printed. It should provide a very useful literature survey for chemists active in the investigation of this series of compounds." *Morris Kupchan.*

Chemical week, Aug. 11, 1951, p.34. ¼ col.

"Presents the important heterocyclic nitrogen analogs of the seven different ring systems established by fusion of four benzene rings—with the systems being discussed in sequence."

Andrade, Edward N. da C. Viscosity and plasticity. 82p. 1951. Chemical Pub., 212 Fifth Ave., New York, $2.25.

Rubber age, Aug. 1951, p.616. ⅛ col.

"The phenomena of viscosity and plasticity are outlined . . . The subject is covered with a special view to those who deal with viscous and plastic materials on an industrial scale, particularly paint technologists . . . Divided into three lectures originally presented by the author before the Oil and Colour Chemists' association at the University of London."

Baer, Jean G. Ecology of animal parasites. 224p. 1951. Univ. of Illinois Press, Urbana, Ill., $5.

American scientist, July 1951, p.504. ¼ col.

"Divided into five parts, the volume considers animal associations and definitions, adaptations to parasitism, host-parasite relationships, the physiology of parasites, and the origin of parasitism."

Science, Aug. 10, 1951, p.163. 1⅛ col.

"Contains so much interesting information, hitherto widely scattered in the literature, that it will be a welcome addition not only to every parasitologist's library, but also to the bookshelves of general biologists, who are likely to have their ideas of parasitology limited by the comparatively narrow medical and veterinary fields covered by most books on the subject." *Asa C. Chandler.*

Bailey, Alton E. Industrial oil and fat products. Ed.2, revised. 967p. 1951. Interscience Publishers, New York, $15.

Chemical engineering, Sept. 1951, p.354. ½ col.

"The book is a little heavy on its tabular content, and a little light on its illustrations. In general though, this new second edition looks like a very good thing." *G. W. M.*

Chemical week, June 30, 1951, p.36. ¼ col.

"Reports on advances made in the research and technology of the fats and oils industries during the last six years while still retaining the essential outline and scope of the previous volume."

Food engineering, Aug. 1951, p.184. ⅓ col.

"Largely rewritten, though its plan and scope remain essentially the same as its predecessor. Two exceptions stand out: Figures on production and consumption have been eliminated, and the chapter on handling, storing and grading has been greatly expanded."

Bailey, Stanley F., & Smith, L. M. Handbook of agricultural pest control. 191p. 1951. Industry Publications, Inc., New York, $3.25.

Chemical week, June 30, 1951, p.36. ¼ col.

"Prepared for use by the custom spray operator, the pest control operator, farm advisor, field worker, etc., this handbook covers the agricultural chemicals . . . with respect to their rates of application, formulas, fumigation, spray machines and toxicology. The authors also cover the topics of dusts, and dusting, aircraft and mosquito control . . . The reader can also find fundamentals and data needed in making estimates and other planning and application activities involved in working with agricultural chemicals."

Binder, R. C. Advanced fluid dynamics and fluid machinery. 426p. 1951. Prentice-Hall, New York, $8.

Heating and ventilating, July 1951, p.94. ⅗ col.

"The objective . . . is to bridge the gap that has existed between the usual first treatment of the subject and the advanced problems and reference material. Actually, it is an extension of Dr. Binder's Fluid Mechanics . . . Divided into three main parts—fluid dynamics, fluid machinery, and fluid dynamics [sic] . . . This book is an outgrowth of course work presented at Purdue University over a period of years."

Journal of the Franklin Institute, Sept. 1951, p.271. ⅗ p.

"An outgrowth of course work and mimeographed notes presented at Purdue University, and articles published by the author in professional journals. Physical concepts and basic quantitative relations are stressed. Analogies are used both in introducing subjects and in analyzing them." *A. D. Hay.*

Product engineering, Sept. 1951, p.286. ⅔ col.

"One frequently finds a serious gap between the usual first treatment of a subject and the problems and reference material encountered in engineering practice and current literature. One of the objectives of this book is to fill that gap in the field of fluid mechanics."

Bird, C. L. Theory and practice of wool dyeing. Ed.2. 231p. 1951. Society of Dyers and Colourists, Bradford, England, 15s.

Chemical trade journal and chemical engineer, Aug. 31, 1951, p.496. ¾ col.

"A book which really lives up to its title, and which meets the needs both of the student and of those engaged in the practice of dyeing wool its various forms and of union fabrics . . . It is mainly on its practical side that Mr. Bird's book has commanded and will continue to command, most interest."

Blair, George W. Scott. See Scott Blair, George W.

Bohm, David. Quantum theory. 646p. 1951. Prentice-Hall, New York, $10 (Schools, $7.50). (Prentice-Hall physics series.)

American scientist, July 1951, p.506. ⅓ col.

"The central aim of this book is to provide, at a relatively elementary level, a formulation of the quantum theory in terms of comparatively qualitative and imaginative concepts which are of a totally different nature from those of the classical theory of physics."

Journal of the Franklin Institute, Aug. 1951, p.207. ⅗ p.

"The author has succeeded in treating the quantum theory in such a way that its physical significance is clearly shown, while at the same time he has made liberal use of mathematics where necessary to state the ideas involved with the necessary degree of precision and exactness . . . Will probably be well received as a text for use in quantum mechanics courses either at the graduate or advanced undergraduate level, since it will give the student a good understanding of the physical significance of the quantum theory before exposing him to the more complete but more abstract, mathematical treatment . . . Will also be found to be of interest and value to the practicing physicist." *M. D. Earle.*

Product engineering, Aug. 1951, p.256, 259. 1 col.

Bondi, Arnold A. Physical chemistry of lubricating oils. 380p. 1951. Reinhold, New York, $10.

Chemical week, June 30, 1951, p.36. ⅓ col.

"For engineers, physical chemists and technical men in the field, this volume presents up-to-date facts and theories concerning lubricating oils, indicating at the same time the physical principles, underlying their action."

Bowden, C. E. Diesel model engines. Revised edition. 216p. 1951. P. Marshall, London, 9s. 6d. net.

Journal of the Royal Aeronautical Society, July 1951, p.453. 7 l.

"Contains up-to-date details of British and foreign types of model diesel engines and descriptions of various aircraft, boats and cars in which they are installed; the use of radio con-

trol for these models is also included. The six chapters also cover design, installation and working of diesels, fuel and lubrication, starting, problems of operation and trouble finding . . . A most useful book for the model enthusiast."

Breazeale, William M., & Quarles, L. R. Lines, networks and filters. 293p. 1951. International Textbook, Scranton, Pa., $6.50.

Radio-electronics, Sept. 1951, p.126. ⅓ col.

"Deals entirely with communication by wire . . . Intended for students or technicians who have the equivalent of two years of college math and who know a.c. theory. Algebra is used throughout to show fundamental properties of transmission lines and lumped networks at low and high frequencies." *I. Q.*

Brown, Charles L. Basic thermodynamics. 266p. 1951. McGraw, New York, $4.50.

American scientist, July 1951, p.508. ⅓ col.

"The author . . . intends his book for engineering students who have had previous instruction in elementary heat power."

Chemical engineering, Sept. 1951, p.355-356, 358. 2⅓ col. including other reviews.

"A text written for a one-semester course on mechanical application . . . The book has certainly fulfilled its purpose and the author is to be congratulated for his fine contribution." *Ju Chin Chu.*

Mechanical world, July 6, 1951, p.15. ½ col.

"Teaches the first and second laws of thermodynamics and their applications to the study of devices which convert heat into work or which use work to transport heat. It also has a short section on heat transmission in relation to power generation and refrigeration."

Browne, W. R. See David, T. W. Edgeworth.

Bryan, Arthur H., & Bryan, C. G. Principles and practice of bacteriology. Ed.4, revised. 410p. 1951. Barnes, New York, $1.75. (College outline series.)

Journal of the American Pharmaceutical Association, scientific edition, Aug. 1951, p.419. ⅜ col.

"Within the modest limits of its claim that it presents material for those 'who are required to know the essentials of bacteriology,' this book can be useful . . . Gives a superficial review of an enormous amount of information . . . Includes tabulated references of specific subject matter in 10 textbooks on bacteriology and a bibliography after each chapter . . . Has a good index."

Soil science, July 1951, p.84. ⅓ p.

"Covers the whole field of bacteriology, which is defined as the study of bacteria, viruses, yeasts, molds, and protozoa . . . Contains added material on antibiotics, tropical bacteriology, electron microscopy, milk bacteriology, and viruses . . . A very useful book to have at hand."

Burkhardt, Charles H. Domestic oil burners. 359p. 1951. McGraw, New York, $6.

Heating and ventilating, June 1951, p.103. ⅓ col.

"Since proper installation and servicing of domestic oil burners depends on an understanding of not only the oil burner itself, but the many factors that influence its operations, those concerned with the functions of installing and servicing will appreciate having such information in one volume."

Burns Morton, F. J. Foremanship; a text-book. 316p. 1951. Chapman & H., London, 25s. net.

Mechanical world, June 29, 1951, p.609. ½ col.

"A practical working text for the foreman, both for instruction and for permanent reference, which sets out clearly and concisely all the relevant information required on direction, control, and as regards personnel."

Busvine, James R. Insects and hygiene. 482p. 1951. Methuen, London, 30s.

Journal of economic entomology, Aug. 1951, p.628. 1 col.

"Dr. Busvine has succeeded admirably in organizing and presenting a large quantity of information of value to health officers, sanitarians, pest control operators, and agricultural and industrial workers dealing with stored products. Applied entomologists throughout the world will frequently refer to this useful contribution to their science." *William E. Bickley.*

Journal of the Royal Sanitary Institute, July 1951, p.450. ⅔ p.

"Eminently readable and informative . . . Considering the difficulties of compilation and selection, Dr. Busvine's book succeeds in presenting a very diffuse subject in a singularly readable manner. It will be of especial value to all those engaged in the public health service and a practical guide to many engaged in applied entomology."

Nature, Sept. 1, 1951, p.354. ¾ col.

"Dr. Busvine has produced a truly scientific and very practical treatise on this diverse collection of insects . . . Many of the topics are necessarily treated in a brief and superficial style. But on the whole the author has succeeded in maintaining an admirable balance in the treatment that he gives to all sides of the subject." *V. B. Wigglesworth.*

Cage, John M. Theory and application of industrial electronics. 290p. 1951. McGraw, New York, $4.75.

Electronics, Aug. 1951, p.288, 290. 1 col.

"Written primarily for college graduate and undergraduate courses in industrial electronics. Since the book comprehensively and broadly covers the subject without being superficial, it will also be interesting to others wishing to gain a general knowledge of the subject . . . The first book of its kind which has offered an integrated treatment of electronic circuits and devices outside the field of communications." *James H. Burnett.*

Calder, Ritchie. Profile of science. 326p. 1951. Allen & Unwin, London, 16s. net.

Nature, June 16, 1951, p.963. ⅓ col.

"Setting out unashamedly to interest those who would not touch a 'scientific' book, Ritchie Calder must be congratulated on the adventurous nature of his approach. He is aware that most people are interested in the biographical details of famous men and uses this as the way to introduce the four main subjects of the atom, radar, penicillin and vitamins . . .

Perhaps the only criticism that can be made of his excellent impressionistic book is that occasionally the popular style becomes a little too 'hail-fellow-well-met' for those with more retiring natures."

Candler, C. Modern interferometers. 502p. 1951. Hilger, London, 57s. 6d.

Automobile engineer, July 1951, p.278. ½ col.

"So far as is known, this is the first comprehensive work dealing with the subject of interferometers . . . Covers these instruments, their uses, and the theory necessary to their understanding . . . References to published literature, old and new, are included very fully, and illustrations are provided wherever helpful . . . Should be the standard reference work on this subject."

Engineering, Aug. 17, 1951, p.195. ⅞ col.

"Attractively written, and containing a wealth of practical detail based on first-hand experience, Mr. Candler's book promises to prove indispensable as a source of reference on modern interferometers and invaluable as a laboratory manual for all who wish to employ these delicate and sometimes temperamental instruments to the best advantage."

Cassidy, Harold Gomes. Adsorption and chromatography. 360p. 1951. Interscience Publishers, New York, $7. (Technique of organic chemistry, v.5.)

Chemical engineering, July 1951, p.274. ½ col.

"Chemists who are faced with the task to 'clean up a compound' will do well to consult Dr. Cassidy's monograph. The only adverse comment is that no effort was made to describe industrial applications such as commercial dehumidification or industrial decolorization but this is a minor complaint." *F. C. Nachod.*

Journal of the American Pharmaceutical Association, scientific edition, June 1951, p.303. ½ col.

"Throughout, the book has been written from the point of view of the organic chemist . . . Replete with references, both general and to the original literature . . . Has a good index."

Soil science, July 1951, p.81. ⅝ col.

"The purpose of this book is to explain the means by which the principle of adsorption can be employed in the separation of organic mixtures . . . Even though the author has limited himself almost entirely to consideration of liquid-vapor, liquid-liquid, and liquid-solid interfaces, he has made a highly important contribution by carefully organizing and presenting the material contained in more recent publications on these parts of the field of research."

Chapman, William A. J. Workshop technology. pt.3. 468p. 1951. E. Arnold, London, 30s. net.

Engineering, Aug. 17, 1951, p.195. ¾ col.

"To appreciate this book properly, it is desirable to refer back to Parts I and II, which were published in 1943 and 1946, respectively . . . The author's expectation is likely to be realised, that, with Parts I and II, 'it should provide a useful text-book for students working for Ordinary and Higher National Certificates, the I.Mech.E. examination in Workshop Technology, Metrology, and Machine Tools, and the Final City and Guilds examination in Machine Shop Engineering'; and, too, his hope that 'it will be read with equal interest, and advantage, by the more mature engineer'."

Journal of the Institution of Production Engineers, July 1951, p.335. 1 p.

"The third and final part of a set of books which have done much to foster a true appreciation of the subject, which has its own particular problems in study and teaching . . . The author has covered a wide field yet has included the fundamentals so necessary to any analytical approach to metalworking processes . . . Excellently produced throughout." *T. B. W.*

Chisholm, A. J., and others. Action of cutting tools. 88p. 1951. Machinery, Brighton, England, 3s. 6d. net. (Machinery's yellow back series, v.31.)

Chartered marine engineer, Aug. 1951, p.11. 7 l.

"The first two chapters . . . cover the four main groups of factors in machining which affect productivity . . . whilst the third chapter outlines the applications of some of these principles to practical cutting tools. The last two chapters consider the theory of the economics of machining operations and give an analytical study of practical machining conditions designed to promote productivity."

Mechanical world, July 20, 1951, p.66. ⅓ col.

"Explains the characteristics of machined surfaces and the phenomena accompanying their occurrence. Then the cutting forces, tool wear and chatter vibrations are similarly dealt with, after which the authors show how the fundamental principles are applied to practical cutting tools . . . The study is completed by a chapter on the economics of machining operations and another which sets out an analytical study of practical machining conditions."

Collacott, R. A. Horizontal Diesel engines. 119p. 1950. Temple Press, London, 8s. 6d. net.

Journal of the Institute of Fuel, July 1951, p.187. ⅔ col.

"This book, which deals with engines up to 300 b.h.p. of the type mainly used in industrial establishments, has been written primarily for students and for engine users with little technical knowledge or experience of diesel engines." *D. J. White.*

Power and works engineering, July 1951, p.226. ½ col.

"Intended . . . for students and users having little technical knowledge or experience of diesel engines and, in particular, for overseas users of British horizontal engines . . . Should indeed meet the requirements of the type of reader for which it is intended."

Conway, E. J. Microdiffusion analysis and volumetric error. Ed.3, revised. 391p. 1951. Lockwood, London, 25s.

Chemical trade journal and chemical engineer, July 20, 1951, p.160. ½ col.

"Apart from its direct appeal to biochemists, Prof. Conway's book should be of high interest to all analysts."

Industrial chemist, Aug. 1951, p.375. ⅜ col.

"Many of the reactions described . . . are of general interest and have applications outside the field of micro-diffusion analysis. The section dealing with volumetric error is one which every analytical chemist should read. There is no doubt that this book will eventually be

reckoned as one of the classics of analytical chemistry." *R. B.*

Crede, Charles E. Vibration and shock isolation. 328p. 1951. Wiley, New York, $6.50.

Electrical manufacturing, Sept. 1951, p.220, 222. ¼ col.

"Resilient supports to protect equipment and machinery from vibration are discussed in this book which, being primarily for the practicing engineer, concentrates on the principles of isolation and the design of isolators, rather than on general vibration theory . . . Isolation is treated both from the analytical and the descriptive viewpoint to permit the material to be useful to the widest possible audience."

Heating, piping & air conditioning, Sept. 1951, p.234, 236. ⅛ col.

"Analyzes the causes of vibration and shock and evaluates the use of natural and synthetic rubbers, metal springs, felt and cork for designing isolators. Sections are devoted to special applications of isolators (in machinery such as punch presses, electric motors, military equipment, etc.)."

Modern machine shop, Sept. 1951, p.318. ¾ col.

"Intended primarily to provide the practicing engineer with a rigorous, yet practical, reference on the design and application of resilient mountings . . . Concentrates on the principles of isolation and the design of isolators, rather than on general vibration theory and practice. Although the book has been written primarily for the practicing engineer, the analytical treatment of certain problems may be of value to students having special interests."

Product engineering, Sept. 1951, p.283, 285. ½ col.

"With the ever increasing demand for more precise equipment and machinery, the designer is often confronted with problems of isolating vibrations or sound or reducing the effect of shock loads. This book should prove useful to those with problems of this type."

Culver, Charles A. Musical acoustics. Ed.3. 215p. 1951. Blakiston, Philadelphia, $4.25.

Radio & television news, Sept. 1951, p.141. ⅖ col.

"A basic text written for the musician or the technician concerned with the recording and/or the reproduction of sound. Written in easy-to-understand style, this book is based on a course in musical acoustics offered music students at Carleton College. The author has deliberately avoided the use of involved mathematics and highly technical terminology with the result that the subject matter may be easily grasped by the veriest tyro."

David, T. W. Edgeworth. Geology of the commonwealth of Australia; edited and supplemented by W. R. Browne. 3v. v.1, 747p.; v.2, 618p.; v.3, 5 maps. 1950. E. Arnold, London, £12 12s. net.

Nature, July 28, 1951, p.131. 2⅓ col.

"These volumes, unequalled among regional surveys of comparable dimension for their scope and range of completeness, mark a major event in the annals of Australian geology and form a fitting monument to the memory of Sir Edgeworth David, their chief architect." *C. E. Tilley.*

Davis, J. G. Milk testing. 260p. Dairy Industries, Ltd., 24 Bride Lane, London, E.C.4, 15s.

Milk plant monthly, Aug. 1951, p.90. ¾ col.

"Dr. Davis provides a useful reference work and working manual for the use of dairy technicians, laboratory workers, public health officials, plant operators, managers, and students."

De France, Joseph. Alternating current fundamentals. 216p. 1951. Prentice-Hall, New York, $4.65.

Industrial laboratories, Aug. 1951, p.12. ⅓ col.

"The book would appear to be well suited for teaching at the technical institute level for which it is intended, but not suitable for the electrical engineer . . . Not written from the usual 'Power' point of view since it is primarily for the student of practical electronics." *N. J. B.*

Deryck, W. Photographic study of rapid events. 158p. 1951. Oxford Univ. Press, London, 21s. net.

Light and lighting, Aug. 1951, p.288. ⅔ col.

"The author has had unique opportunities for the study of the subject in his work in the Royal Naval Scientific Service, and the remarkable results obtained under water by him and his colleagues is [sic] well known. His book is clear, interesting, and informative . . . The standard of production and illustration is high and the language is clear and economical." *J. M. W.*

Deutsch, Sid. Theory and design of television receivers. 536p. 1951. McGraw, New York, $6.50.

Radio-electronics, July 1951, p.95. ⅓ col.

"A text, written on the engineering level, which can appeal to the service technician as well as the student. The author has combined lucid description of TV circuit behavior with direct, full presentation of theory—no simple feat. Although mathematics is not avoided it is used judiciously."

Diserens, Ludwig. Chemical technology of dyeing and printing; translated by Paul Wengraf and Herman P. Baumann. v.2. 600p. Reinhold, New York, $14.

Chemical week, July 21, 1951, p.41. ⅓ col.

"Discusses in detail the chemistry of the reactions occurring on fibers, in addition to processes involved in their dyeing and printing. Groups covered include the basic dyestuffs, pigments, and aniline black, plus dyestuffs used for synthetic fibers. Bibliographic literature and patent references also appear."

Dixon, Wilfred, & Massey, Frank, jr. Introduction to statistical analysis. 370p. 1951. McGraw, New York, $4.50.

American scientist, July 1951, p.504, 506. ⅓ col.

"Written as a basic statistics course for students from all fields in which statistics finds application; the only mathematical knowledge necessary is of algebraic addition, subtraction, and multiplication."

Dushman, Saul. Fundamentals of atomic physics. 304p. 1951. McGraw, New York, $5.50.

Chemical week, July 28, 1951, p.30. ⅛ col.

"[The author] includes in the volume a history of mathematical techniques and formulas as well as a history of physics; in discussing the problems of atomic and nuclear structures, he explains the quantitative relations involved. Recent developments concerning nuclear phenomena, atomic energy and the production of high-voltage particle accelerators are particularly noted."

Eardley, A. J. Structural geology of North America. 624p. 1951. Harper, New York, $12.50. (Harper's geoscience series, v.9.)

American scientist, July 1951, p.496, 498. ⅗ col.

"Although designed primarily as a textbook, this unusually significant volume will most certainly be widely used as a manual and reference work by a large fraction of all professional geologists in North America. Petroleum geologists and those concerned with metalliferous ore deposits will seize upon it with great glee, and their high hopes for its usefulness will be amply fulfilled."

Economic geology, Aug. 1951, p.553. ⅓ p.

"A monumental volume representing more than 10 years of work, and is the only one of its kind in the field . . . Although this volume is meant for advanced undergraduates it really is presented on a graduate student level. It should readily win first place as the outstanding advanced textbook on structural geology and a general reference for all geologists interested in regional and structural geology."

Eitel, Wilhelm. Silicate melt equilibria; translated by J. G. Phillips and T. G. Madgwick. 159p. 1951. Rutgers Univ. Press, New Brunswick, N. J., $5.

Canadian chemical processing, June 1951, p.488. 10 l.

"A comprehensive text on the principles and diverse phenomena involved in the heterogeneous fusion equilibria in silicate multi-component systems. Dr. Eitel has checked the translation carefully and made further revisions in the interest of clarity and has incorporated results of more recent research in the field . . . Well illustrated . . . and contains a subject index."

Glass industry, June 1951, p.314. ⅔ col.

"Short, compact, and clearly written . . . No attempt has been made to write an 'easy' book, because silicate melts are not simple. Instead, the reader's time and mental effort is [sic] conserved by a logical and orderly development, by a simplified terminology, by an abundance of excellent drawings, and by the exclusion of all situations not likely to occur in silicates . . . The present volume is much more than a translation. It is really a new edition in English." *R. F. Ferguson.*

Encyclopedia of chemical technology; edited by Raymond E. Kirk and Donald F. Othmer. v.6: Explosives to furfural. 1008p. 1951. Interscience Encyclopedia, New York, $20.

Industrial laboratories, July 1951, p.12. ¼ col.

"Intended to present a comprehensive summary of industrial knowledge on materials, methods, processes and equipment for the chemist and the engineer." *N. J. B.*

Journal of chemical education, Aug. 1951, p.452. ½ col.

"The subjects covered . . . are largely industrial in nature, except for a few sections . . . As usual, the material is up to date . . . The necessity of a set of the encyclopedia in every chemical library becomes more apparent as the number of volumes increases." *Kenneth A. Kobe.*

Essipoff, Marie A. Making the most of your food freezer. 310p. 1951. Rinehart, New York, $3.

Quick frozen foods, Sept. 1951, p.30. ¾ col.

"The author . . . gives the sum total of her experience in freezing everything from soup to leftovers in the home . . . Shortcuts, worktricks and tips on cutting food bills are sprinkled throughout the book together with a number of recipes giving specific instructions for preparing, freezing and serving."

Refrigerating engineering, Aug. 1951, p.777. ¼ col.

"Written in a chatty style by an author who has actually frozen and prepared most of the foods she describes . . . Full of new ideas, new techniques, and new recipes . . . Would be an excellent sales promotion piece to distribute among prospective buyers of food freezers. If it doesn't convince the most skeptical of the advantages of owning a home freezer, nothing would."

Fabry, Charles. Elements of thermodynamics; translated from the sixth French edition by G. F. Herrenden Harker. 229p. 1951. Muller, London, 15s. net.

British journal of applied physics, Aug. 1951, p.239. ⅜ col.

"The work is hardly suitable as a text-book in itself, but as ancillary reading it will be valuable particularly as the student will have to exercise his knowledge of the subject in order to satisfy himself that the methods used by Professor Fabry are as valid as those with which he has been accustomed." *R. S. Silver.*

Fich, Sylvan. Transient analysis in electrical engineering. 306p. 1951. Prentice-Hall, New York, $5.50.

Journal of the Franklin Institute, Aug. 1951, p.208. ½ p.

"Designed for a stiff undergraduate course, the text can also be used in a first graduate course where the students have had little previous work in transients . . . Engineers who have not recently been exposed to material on transients may do well to examine this book. It should prove extremely helpful." *S. Charp.*

Finch, James Kip. Engineering and western civilization. 397p. 1951. McGraw, New York, $5.

Engineering and mining journal, Aug. 1951, p.98. ½ col.

"Not only mining and metallurgical engineers, but members of all branches of the engineering profession, as well as historians and laymen, will welcome this book as the first authoritative study of the engineer's contribution to society. Dean Finch . . . tells a swift and powerful story of the engineer's 50-century struggle to make man the master of his own dwelling place." *Walter Miller.*

Fisher, Robert Moore. How about the weather? 186p. 1951. Harper, New York, $3.

Natural history, June 1951, p.246. ⅜ col.

"Enough books have been written for the layman on weather and its prediction to stock a sizable library. While some of these fulfill the purpose for which they were published, many are as hazy as some of the weather they describe. This volume, which explains weather facts logically and coherently, definitely belongs to the former category . . . It is as good a book on weather for the non-scientific reader as we have read in several years." *Robert R. Coles.*

Foster, Jay Rhoads, & Rodey, B. S., jr. Public utility accounting. 690p. 1951. Prentice-Hall, New York, $10.

American Gas Association monthly, July-Aug. 1951, p.36. 1¾ col.

"To those both in and out of the public utility business who seek an understanding of all of the phases of utility operations where accounting, either directly or indirectly, is involved, the material in this book is indispensable." *Harold H. Scaff.*

Edison Electric Institute bulletin, July 1951, p.254. 3 col.

"This . . . volume for the first time makes available a comprehensive, authoritative, and timely treatment of accounting methods, practices, and problems peculiar to electric and gas utilities under governmental regulation . . . Messrs. Foster and Rodey have made an outstanding, and, at this date, unique contribution to the accountants of the electric and gas utility industries, which will also be of great value to many others not in that precise category." *H. C. H.*

Frear, Donald E. H. Pesticide handbook. 158p. Commercial Printing Co., Inc., State College, Pa., $1.

Journal of economic entomology, Aug. 1951, p.628. ⅝ col.

"A continuation and expansion of *Pest Control Materials* published in 1949 and revised in 1950 . . . Dr. Frear and his associates have performed a real service in starting and continuing this publication. It should also be marketed among county agents and extension specialists who have to do with pest control."

Frith, Elizabeth M., & Tuckett, R. F. Linear polymers. 355p. 1951. Longmans, New York, $3.50.

Chemical age, Aug. 11, 1951, p.201. 1⅛ col.

"Not for the specialist, who will seek his information in the reviews and the abundant polymer literature, nor is it for the undergraduate taking non-specialised courses in the university, but for those commencing research on any aspect of high polymers it will be invaluable." *R. C. P.*

Funke, J., & Oranje, P. J. Gas discharge lamps; principles, characteristics, applications; translated by G. Ducloux-Sutton. 270p. 1951. Cleaver-Hume, London, 30s.

Electrical world, Sept. 10, 1951, p.238. ⅛ col.

"Presents a survey of existing types of discharge lamps together with relative possibilities, advantages and disadvantages, characteristics and principles. It is phrased in terms that can be understood by the nontechnically trained and it touches upon technical points in simple terms."

Post Office Electrical Engineers' journal, July 1951, p.84. ⅛ col.

"The book, which was originally released on the Continent in 1941, has been completely revised and rewritten, and covers technical developments up to the spring of 1950 . . . Can be well recommended as authoritative on the subject of electric discharge lamps." *W. T. G.*

Sheet metal industries, Aug. 1951, p.778. ⅝ col.

"A comprehensive treatise on gas discharge lamps of all types and the material contained . . . is not devoted solely to the products of any one company or country . . . Well illustrated . . . and constitutes a very useful addition to the literature on a subject which is of great current importance."

Garrels, Robert M. Textbook of geology. 511p. 1951. Harper, New York, $5. (Harper's geoscience series, v.8.)

American scientist, July 1951, p.500, 502. ⅛ col.

"[This] text is notable for its clarity of phrase, its new but logical sequence of topics, and its emphasis upon the quantitative aspects of the science as well as the qualitative . . . The numerous illustrations are largely new and are well integrated with the text. The considerable number of aerial photographs is especially noteworthy."

Bulletin of the American Association of Petroleum Geologists, Aug. 1951, p.1900. ¾ p.

"Students beginning with this volume can not fail to appreciate the importance of reason in geology and to be influenced toward quantitative geology without the usual mathematical discomfort. Geologists will find this book a stimulating, easily read, and very worthwhile review." *John C. Maher.*

Economic geology, Aug. 1951, p.552. ⅜ p.

"Attempts to present an analytical rather than expository approach and is supposedly developmental rather than topical, and each chapter stemming from the preceding one. The author attempts, and has succeeded well, in presenting an understanding of geologic processes as opposed to listing their results or products."

Science, June 22, 1951, p.730. ⅜ col.

"A well-written text of unusual charm and simplicity, illustrated with refreshingly new photographs, many valuable graphs, and other facile sketches. More mathematics is visible than occurs in many older texts, but not more than the average college student should master. The presentation of subject matter is unusually lucid, with much new material in the way of example, phraseology, and point of view." *Herbert P. Woodward.*

Gillespie, Cecil M. Accounting systems; procedure and methods. 811p. 1951. Prentice-Hall, New York, $8.65 (Schools, $6.50).

Accountants digest, June 1951, p.199. ⅜ col.

"Presents a complete systems methodology for the practitioner who designs and installs systems or procedures, and to the office manager or accountant who desires to improve operations procedures . . . This outstanding book admirably fills a gap in its special area in the field of accounting. It is virtually an encyclopedia of pertinent information for anyone who must improve, change or install any phase of an accounting routine."

Journal of accountancy, Aug. 1951, p.237. ½ col.

"Explains in great detail how to make a business survey which will show whether a systems revision is needed. Should the survey prove that a change would be useful, the book indicates how to design a new system or procedure and how to prepare the systems report or manual. Its aim and content should be of value both to the practitioner who designs and installs complete procedures, and to the office manager or accountant who wants to improve his own procedures or to reduce clerical cost."

New York certified public accountant, Aug. 1951, p.524. 1⅝ col.

"The accountant who wishes to increase his competence in the field of systems, procedures, and methods is advised to obtain this book, whether he be an experienced systematizer or a neophyte . . . Provides a far more comprehensive coverage of the techniques and knowledge required for this type of assignment than has heretofore been available. As such, it fills a gap in the literature of accounting. The style is readable . . . This book is a meritorious one, and will earn a place on the desk-top library of many busy accountants." *Michael A. C. Hume.*

Goodey, T. Soil and freshwater nematodes. 390p. 1951. Wiley, New York, $7.

Soil science, July 1951, p.85. ⅓ p.

"[The author's] purpose in writing the book was to systematize the information available on the soil and fresh-water nematodes, describe each genus, and present facts of biological interest, with special reference to food habits . . . The illustrations . . . are of special interest and value . . . A valuable reference book for specialists."

Gregory, William King. Evolution emerging; a survey of changing patterns from primeval life to man. v.1, 736p.; v.2, 1013p. 1951. Macmillan, New York, $20.

American scientist, July 1951, p.480. 2¼ col.

"*Evolution Emerging* does for the twentieth century what *The Origin of Species* did for the nineteenth . . . Gregory has marshalled all the available information known to him, that bears upon the history and development of living creatures throughout geologic time . . . The recognition of life patterns and the search for understanding of the nature and causes of the changes in those patterns comprise in fact the central theme of his magnificent endeavor. Limiting himself to the animal kingdom, with only an occasional word concerning plants, he has gained deep and rewarding insight with regard to the operations of evolutionary processes. Thus, his book appropriately serves two needs, arising separately or concurrently in the minds of his readers."

Scientific American, July 1951, p.64. 4⅔ col.

"The story of the vertebrates as told by Gregory—an epitome of his research and teachings. Is this a 'definitive' work, not subject to criticism or change? Not at all; Gregory, most open-minded of scientists, would be the last to make such a claim. There are as yet many great gaps in our knowledge of the fossil record and alternative explanations are possible for many of the interpretations reached by our author; specialists on one group or another may reasonably dispute certain of Gregory's conclusions. We have here a vast panorama painted by a master hand. Details are obscure in many places . . . But the work as a whole is one of great and enduring value." *Alfred S. Romer.*

Groves, A. W. Silicate analysis. Ed.2, revised and enlarged. 336p. 1951. Allen & Unwin, London, 25s.

Cement, lime and gravel, July 1951, p.39. ¾ col.

"Numerous additions or modifications have been made to cover the progress that has occurred since the appearance of the first edition."

Chemical age, July 7, 1951, p.27. ⅔ col.

"Provides a practical and up-to-date handbook for the analysis of rocks and silicate minerals—both natural and artificial—used in industry. The needs of various types of workers are considered—the analyst with no special training in petrology; the analyst who is both a chemist and a petrologist; and the geologist without special training as an analyst, who requires to understand the methods of silicate analysis so that he may be able to guide the analyst in his work." *F. N.*

Mine & quarry engineering, Sept. 1951, p.308. ⅔ col.

"Provides an up-to-date practical handbook for the chemical analysis of rocks and silicate minerals. The author has borne in mind the needs both of the analyst who has no special training in petrology and of the geologist with no special training in analysis. He has also given special attention to the requirements of those who are obliged to instal laboratories in out of the way parts of the world . . . Strongly recommended to all who have occasion to analyse rocks."

Refractories journal, June 1951, p.263. 1 col.

"The best alternative methods or methods for special conditions have been added and reference has been made to all the more promising work, methods and suggestions published subsequent to the first edition. The range of most useful qualitative tests has been expanded. The new matter is not confined to analytical methods; much of it is of a more general character, though all closely bearing on the problems of the silicate analyst."

Hadekel, R. Displacement pumps and motors. 172p. 1951. Pitman, London, 25s. net.

Chartered marine engineer, Aug. 1951, p.11. ⅔ p.

"The author can . . . be congratulated on a good book in a new field, and if this book, as he hopes, stimulates interest and research to answer better the many problems still largely settled by rule of thumb methods, then a useful task will have been accomplished."

Engineering and boiler house review, June 1951, p.182. ⅓ col.

"Provides a general survey of the subject and seeks to establish fundamentals rather than to give extreme technical detail."

Machinery (London), Aug. 2, 1951, p.187. 12 l.

"The approach is mathematical and fundamental, and the line drawings are clear and uniform in style . . . Should prove of considerable value, particularly to designers and development engineers."

Mechanical world, July 6, 1951, p.15. ½ col.

"The book is directed to design engineers . . . Deals at length with piston and gear types of machines and includes vane machines and also machines based on spherical and skew mechanisms. Various general problems receive attention, and particular notice is given to the constructional problems of gear and vane machines. The matter of variable capacity is examined and there is a short chapter also on hand pumps and foot pumps . . . Concludes with a chapter on displacement machines in practice in which the types are classified and the use of each group is broadly indicated."

Hager, Dorsey. Practical oil geology. Ed.6, revised. 589p. 1951. McGraw, New York, $7.50.

Economic geology, Aug. 1951, p.552. 11 l.

"A practical book on the application of geology to the finding of oil and essential data relating to the occurrence, drilling, extraction, and character of oil and its relation to gas and water. Like its predecessors it will be a handy book for the student and a general reference for oil men."

Mines magazine, June 1951, p.56. ½ col.

"In composing this book, the author had in mind the idea of writing a book that would acquaint oil operators and drillers as well as the public with the value of applied geology . . . A valuable reference book that should be in the hands of everyone interested in the petroleum industry."

Hall, Newman A. Thermodynamics of fluid flow. 278p. 1951. Prentice-Hall, New York, $7.35 (Schools, $5.50).

Product engineering, Sept. 1951, p.288, 290. 1 col.

"For students who have the fundamentals of both fluid mechanics and thermodynamics, although a certain amount of review of each is included. The material is organized with major emphasis on theory. A number of examples are included to show the application of the theory to various practical problems. Reference is made to several handbook sources for more complete information in design and practical applications."

Hall, Thomas S. Source book in animal biology. 716p. 1951. McGraw, New York, $10.

American scientist, July 1951, p.492, 494. ½ col.

"Divided into parts dealing with the organization of animal life, the activities of the animal organism, the basis of animal behavior, the origin and development of the individual, cellular biology, pathology, evolution and heredity, and zoogeography."

Helme, E. T. Lawson. Automobile efficiency; maintaining performance with electrical test equipment. 116p. 1951. Trader Pub., London, 10s. 6d.

Electrical review, June 29, 1951, p.1388. 9 l.

"Practical advice is given on modern service station requirements; causes of poor performance; how each component of a vehicle's electrical installation operates and how it may be checked and serviced; how an electrical repair shop may be established, equipped and operated as part of the service; and how a battery-charging department may be set up and operated."

Hilton, W. F. High-speed aerodynamics. 598p. 1951. Longmans, New York, $8.50.

Aero digest, June 1951, p.36. ⅝ col.

"A highspeed aerodynamics treatise that was completely and laboriously written from front to back, rather than merely assembled and edited. One of its most striking features is its newness and it contains charts, data and references not yet generally studied in this country . . . This new book is a monument to the technical writing capacity of an individual."

Aeronautical engineering review, July 1951, p.100. 1½ col.

"*High-Speed Aerodynamics* is a book that is most difficult to review adequately because of the unconventional and uneven choice of material, organization, and presentation. The book essentially represents *High-Speed Aerodynamics* from a personal point of view . . . The main shortcoming . . . is the great number of loose statements and explanations, including definitely incorrect statements in some rather important parts." *H. W. Liepmann.*

Holmes, Richard E. Air conditioning in summer and winter. Ed.2, revised. 366p. 1951. McGraw, New York, $5.75.

Heating and ventilating, Aug. 1951, p.115. ½ col.

"Prepared for students with a secondary school technical education . . . The principles and methods of air conditioning are clearly explained, and a sound grounding of essential information is made available . . . Expanded to include new chapters on reciprocating and centrifugal compressors, low side equipment, panel heating systems, packaged air conditioners, and dehumidifiers."

Heating, piping & air conditioning, Sept. 1951, p.236. ½ col.

"Intended to give engineers and students with secondary school technical education a general grounding in the field . . . Consists of the rewritten and expanded lessons given to air conditioning students at Westinghouse Electric Corp. by the author . . . Each chapter is followed by a series of relevant questions and problems for the student . . . Material has been revised to bring up to date all procedures, tabular data, descriptions and illustrations."

Iron and steel engineer, July 1951, p.170. ⅗ col.

"Provides thorough coverage of equipment and procedures essential to efficient planning, installation and upkeep of air conditioning systems. This practical reference supplies well-illustrated explanations of air conditioning principles and methods and shows how they are applied in every-day practice . . . The latest in commercially available equipment . . . is illustrated and explained."

Refrigerating engineering, Aug. 1951, p.777. ½ col.

"Thoroughly revised to bring up to date all procedures, tabular data, descriptions, and illustrations of equipment . . . Contains the latest information on heat pumps, absorption systems, electrostatic air cleaners, and packaged units—equipment on which striking progress has been made in recent years."

Holness, Harry. Inorganic qualitative analysis; a concise scheme. 1951. Pitman, London, 1s. 9d.

Chemical age, July 14, 1951, p.60. ½ col.

"This is not a book, but a sheet of cardboard

folded in four . . . It carries on the inside notes on the preparation of a test solution, seven preliminary tests, and the scheme for the normal group separation of the common cations in tabular form. On the reverse side there are five tests for acid radicles and a procedure for the removal of phosphate . . . It *is* a concise scheme, and not the whole of qualitative analysis." *C. L. W.*

Jacobs, Morris B., ed. Chemistry and technology of food and food products. Ed.2, revised and enlarged. v.1. 832p. 1951. Interscience Publishers, New York, $12.

Canadian chemical processing, July 1951, p.570. ¼ col.

"Fourteen experts in their field have collaborated to make this book a readable and informative text for those in various branches of the food industry."

Chemical and engineering news, Aug. 6, 1951, p.3190. ¼ col.

"Contains general statements about each of the many aspects of the broad subject of foods, their chemistry and technology. Each of the collaborating editors has outlined the scope of his particular field. In the limited space alloted to each subject, only fundamentals and general considerations could be given." *H. S. Smith.*

Food engineering, July 1951, p.150. ⅔ col. including another review.

"All chapters have been rewritten . . . in the light of progress made during the past seven years. New chapters have been added covering such topics as use of instruments in the food plant, essential oils, the manufacture of chewing gum, and the use of enzymes in food production."

Refrigerating engineering, Aug. 1951, p.777. ⅓ col.

"Thirty-nine collaborators have prepared this authoritative work, bringing all chapters up to date since the first edition was published . . . New chapters covering such topics as instruments in the food plant, essential oils, the manufacture of chewing gum, and the use of enzymes in food production have been incorporated."

Soil science, Aug. 1951, p.167. ⅓ p.

"Divided into three parts: fundamentals, unit operations and processes, and sanitary and quality control . . . Well illustrated. Soil-plant scientists will find much of interest and value in this volume . . . The authors and the editor have done an exceptionally good job in assembling and presenting this material."

Jeans, James. Growth of physical science. Ed.2. 364p. 1951. Cambridge Univ. Press, 51 Madison Ave., New York, $3.75.

Journal of the Franklin Institute, June 1951, p.657. ½ p.

"While the style is simple, some knowledge of algebra, geometry, physics and astronomy on the part of the reader will increase his appreciation of the book, which ties together numerous subjects but cannot explain each one with any thoroughness . . . For the person with some background and training in the physical sciences, and an interest in scientific history and development, the book is excellent." *C. D. Chase.*

Science, Aug. 24, 1951, p.218. ⅓ col.

"This edition, prepared by P. J. Grant, of the Cavendish Laboratory, can be highly recommended to teachers of physics and scientists in the neighboring fields who want to get an insight into the development of the physical sciences . . . The easy style and clarity of description will make this a welcome edition for both students and teachers."

Sky and telescope, July 1951, p.223. 1⅜ col.

"The book is readable and interesting and is a concise source for study of the development of physical science through the centuries." *C. M. Huffer.*

Judge, Arthur W. Motor vehicle engine servicing. 354p. 1950. Pitman, London, 15s.

Automobile engineer, July 1951, p.278. ⅜ col.

"A companion volume to . . . *Automobile Engine Overhaul* . . . Deals essentially with the maintenance and servicing of commercial vehicle engines. The treatment is practical, and is intended for the motor mechanic, motor engineer and operator or vehicle fleet owner. In it are found not only the correct procedure for carrying out various engines and assembly overhauls, but descriptions of the tools required to best carry out this work."

Katz, Joseph J., & Rabinowitch, Eugene. Chemistry of uranium. pt.1. 609p. 1951. McGraw, New York, $7.25. (National nuclear energy series; Manhattan project technical section, division VIII, v.5.)

Chemical and engineering news, Sept. 17, 1951, p.3892. ¾ col.

"Surveys and evaluates all the published and declassified literature dealing with . . . phases of uranium chemistry and probably represents the most thorough compilation that has been given to any element in the periodic system . . . Should be an invaluable aid to anyone interested in uranium chemistry and useful to all inorganic chemists." *Clark E. Bricker.*

Electrical world, Sept. 10, 1951, p.238. ⅛ col.

"Constitutes a source of information for the power engineer when, as and if he finds uranium available to him for derivation of energy from a reactor employing uranium in some practicable form."

Mining engineering, Sept. 1951, p.776. ⅛ col.

"A very large proportion of the material . . . is based on the results obtained in the laboratories of the Atomic Energy Project, much of it not published before. In addition, all of the open literature has been critically surveyed and integrated with the results of the Atomic Energy Project studies."

Kaufman, Milton. Element VIII, ship radar techniques. 30p. John F. Rider, New York, 78c. unbound.

Radio & television news, Sept. 1951, p.142. ¼ col.

"A supplement to the publisher's 'Radio Operator's License Q & A Manual' (Second Edition), and covers the material included in Element VIII of the FCC examinations . . . As an aid in preparing for the license exam, this handbook is excellent and should be of real assistance to the candidate."

Radio-electronics, Sept. 1951, p.126. 10 l.

"The FCC requires . . . that to do radar work on ships an 'operator must have a first- or second-class radiotelephone or radiotelegraph license plus a ship radar endorsement' (Element VIII is required). This small supplement pro-

vides clear answers to the questions of the element, including 17 illustrations. An incomplete index is appended." *M. M. K.*

Kelley, Walter P. Alkali soils. 176p. 1951. Reinhold, New York, $5.

Chemical week, June 30, 1951, p.36. 10 l.

"A monograph devoted to alkali soils—their formation, properties and reclamation, this volume deals with the problems involved and their solution in terms of ion exchange. The author compares conditions in western United States and in Russia where work has been done on the same subject. Previous research in the field is reviewed and evaluated."

Kirk, Raymond E. See **Encyclopedia** of chemical technology.

Kiver, Milton S. F-M simplified. Ed.2, revised and rewritten. 458p. 1951. Van Nostrand, New York, $6.50.

Radio & television news, Aug. 1951, p.134. ⅜ col.

"Rearranged, rewritten, and brought up-to-date to conform with the developments that have taken place in the field since the first edition appeared in 1947 . . . Like Mr. Kiver's other books on the subject of FM and television, this text is recommended for the beginner since it is a clearcut explanation of the subject written in easy-to-understand language."

Kolin, Alexander. Physics; its laws, ideas and methods. 890p. 1950. McGraw, New York, $6.50.

Journal of chemical education, Aug. 1951, p.447. 1 col.

"This textbook has a twofold aim: to give training in physics to students in the biological sciences, and to give training in the methods of the physical sciences as one of the objectives of general education . . . The discussions are easy to follow, the mathematics simple, the figures clear, and the book attractively printed." *Walter B. Keighton.*

Langhaar, Henry L. Dimensional analysis and theory of models. 166p. 1951. Wiley, New York, $4.

Chemical and engineering news, Aug. 13, 1951, p.3404. ⅝ col.

"Recommended to chemical engineers and chemists who must plan experiments and present numerical data, either directly or for the purpose of predicting performance of large-scale equipment." *Kenneth A. Kobe.*

Heating and ventilating, June 1951, p.103. ⅓ col.

"Separate chapters are devoted, respectively, to applications of dimensional analysis in stress analysis, fluid mechanics, thermal problems and electrical problems. There is also a chapter on the method of deriving model laws from the differential equations that govern particular phenomena."

Machine design, June 1951, p.206, 208. ½ col.

"Ten chapters cover: Nature and use of dimensions; principles and illustrations of dimensional analysis; systematic calculation of dimensionless products; algebraic theory of dimensional analysis; similarity and model testing; dimensional analysis applied to problems of stress and strain; some applications of dimensional analysis in fluid mechanics; dimensional analysis applied to the theory of heat; dimensional treatment of problems of electromagnetic theory; and differential equations and similarity."

Plant engineering, Sept. 1951, p.129. ⅛ col.

"Explains the application of dimensional analysis to any particular phenomenon and what variables should be included in the equation."

Lewis, Bernard, & Von Elbe, Guenther. Combustion, flames and explosions of gases. 800p. Academic Press, New York, $13.

Chemical week, June 9, 1951, p.36. 10 l.

"A standard text for the student, engineer and research worker treating the physics and chemistry of combustion processes. The authors analyze the principal fuel-oxygen reactions as well as discussing, with the aid of graphic illustrations, the facts and theories governing ignition and flame propagation under turbulent and nonturbulent conditions."

Lewis, Lena A. Electrophoresis in physiology. 66p. 1950. C. C. Thomas, Springfield, Ill., $1.85.

Chemical and engineering news, July 9, 1951, p.2862. ⅛ col.

"Contains a brief but excellent discussion of the basic principles and methods employed in electrophoresis . . . Recommended to those starting electrophoretic work and to those who wish a clear, concise discussion of the principles and applications of this method of analysis." *D. B. Morrison.*

Ley, Willy. Rockets, missiles, and space travel. 436p. 1951. Viking, New York, $5.95.

Ordnance, Sept.-Oct. 1951, p.290, 292. 1 col.

"The volume is replete with drawings, formulas, and tables. It is the work of a real authority. Despite its shortcomings of style and verbosity it is of interest to all moderns and a necessity to all students of the long-range, liquid-fuel rocket." *F. W. Foster Gleason.*

Liddicoat, Richard T., jr. Handbook of gem identification. Ed.3, revised and enlarged. 349p. 1951. Gemological Inst. of America, 541 S. Alexandria Ave., Los Angeles, $5.

Lapidary journal, Aug. 1951, p.232. 1⅛ col.

"Designed to aid jewelers, gem collectors, or students of gemology who have access only to a limited number of instruments, the book outlines simply and concisely conclusive methods for the identification of all colored stones and pearls . . . Because it explains fully all types of gem testing instruments on the market, their value in identifications, and how they can be most effectively used, the [book] . . . is also of tremendous value to anyone with a completely equipped gemological laboratory."

Lipsett, Charles H. Industrial wastes; their conservation and utilization. 317p. 1951. Atlas Pub. Co., 425 W. 25th St., New York, $5.

American metal market, Sept. 15, 1951, p.2. ⅝ col.

"A most handy volume which will provide for persons interested in any phase of the secondary material industry, or the average reader, an acquaintanceship with the various kinds of

waste produced and their utilization by different industries . . . Not intended as a scientific work nor as an encyclopedia on the subject, but it ably deals with general methods of producing scrap, buying and selling procedures, scrap handling and processing . . . Well written and is not involved with highly technical language . . . Contains an index. Sources are credited at the end of each chapter . . . An engaging and informative book for which there has been a need."

India rubber world, Sept. 1951, p.746. ⅛ col.

"Written in semi-technical style, this book presents an overall picture of the production and utilization of waste materials by industry."

Power engineering, Sept. 1951, p.101. ⅓ col.

"Intended to give the reader a general knowledge of the overall picture of the production and utilization of waste material . . . Not intended as a scientific work on the subject . . . The various chapters . . . discuss plastic scrap and its recovery, chemical wastes, glass scrap, all sorts of metal scrap, leather and wood waste, wastes from fruit, rubber, organic materials, grease, textiles, cotton wastes, woolen wastes, paper making wastes and so on."

Lowy, Alexander, & Harrow, Benjamin. Introduction to organic chemistry. Ed.7, revised by Benjamin Harrow and Percy M. Apfelbaum. 480p. 1951. Wiley, New York, $5.

Chemical week, July 7, 1951, p.38. ¼ col.

"The sections dealing with aliphatic chemistry—especially hydrocarbons—along with polymers have been revised to keep pace with recent developments. The authors discuss the subject matter in such a way as to indicate to the student the multiple connecting links that organic chemistry has with medicine, dentistry, pharmacy and the biological sciences."

Macmillan, R. H. Introduction to the theory of control in mechanical engineering. 195p. 1951. Cambridge Univ. Press, London, 30s. net.

Mechanical world, July 13, 1951, p.31. ⅜ col.

"Explains the principles of control and control system elements and goes into the operation, performance and analysis of servo-systems. The treatment is mainly mathematical but as it is introductory it is intended to be perfectly intelligible to any engineer or physicist and not only to the specialist."

Macy, Icie G. Nutrition and chemical growth in childhood. v.3: Calculated data. 1461-2174p. 1951. C. C. Thomas, Springfield, Ill., $8.

Journal of chemical education, Aug. 1951, p.445. ¼ col.

"Users of the first two volumes of this work will find the third volume of considerable interest . . . Contains the calculated data for 41 individual children during some 1000 balance periods representing all together more than 6000 experimental days." *Philip H. Mitchell.*

Matheson, Robert. Entomology for introductory courses. Ed.2. 629p. 1951. Comstock Pub. Co., Ithaca, N. Y., $6.

Ohio journal of science, Sept. 1951, p.279. 9 l.

"Embodies the same general features as the first edition with the following changes: enlargement of many former illustrations . . . and the addition of several new ones; some of the keys have been revised and improved . . . as well as the introduction of more key character illustrations; page references assist in finding detailed information more readily . . . Stresses the biological phases of insects and the important part which they play in world societies. The best available textbook in introductory entomology and highly recommended as a college text for such courses." *Ralph H. Davidson.*

Michels, W. C., & Patterson, A. L. Elements of modern physics. 659p. 1951. Van Nostrand, New York, $6.50.

American scientist, July 1951, p.504. ⅓ col.

"Believing that there is a common need on the part of students of several types for an understanding of the fundamental principles of modern physics, the authors have written this book from mimeographed editions used at Bryn Mawr College."

Journal of the Franklin Institute, July 1951, p.99. ⅔ p.

"To be heartily recommended as a *modern* approach to a *modern* subject. The integration of the many ramifications of the ever-broadening field of physics into a comprehensible unity is vitally needed in order that the student may attain a truly strong background in the subject —after ten years of trial and molding, this book emerges as one which goes far toward meeting this need." *Jean A. Minkin.*

Moffatt, C. W. Paget. Science French course; revised by Noel Corcoran. 331p. 1951. Chemical Pub., 212 Fifth Ave., New York, $4.75.

Chemical week, June 23, 1951, p.40. 11 l.

"Aimed at the science student with no previous knowledge of the language, this book is a self-teaching manual for learning how to read and understand scientific French within a short period of time. Articles, abstracted from the most recent technical and scientific literature, include every branch of science."

India rubber world, Aug. 1951, p.624. ⅛ col.

"A self-teaching manual on scientific French . . . designed to provide students with the necessary minimum of grammar and a selection of extracts for preliminary practice."

Rubber age, Aug. 1951, p.614. 10 l.

"A self-teaching manual for learning how to read and understand scientific French within a few weeks. The well-selected grammar is kept to a minimum . . . The reading matter has been abstracted from the most recent technical and scientific literature. A detailed alphabetical vocabulary eliminates the necessity of a dictionary."

Welding engineer, Sept. 1951, p.93. ⅓ col.

"The major part of the book is devoted to articles taken from every important branch of science . . . Reading selections have been abstracted from the most recent technical and scientific literature. A detailed alphabetical vocabulary eliminates thumbing through a dictionary."

Mohler, J. B., & Sedusky, H. J. Electroplating for the metallurgist, engineer and

chemist. 257p. 1951. Chemical Pub., 212 Fifth Ave., New York, $5.

Chemical age, July 7, 1951, p.27. ½ col.

"Discusses all the important aspects of practical electroplating without going into the involved details of electrochemical theory. The necessary fundamentals . . . are discussed, but they are presented in simple, non-technical language, so that even electroplaters without scientific or technical background will profit by using this book . . . A well-written and informative treatise." *F. N. N.*

Chemical engineering, Aug. 1951, p.268. ⅓ col.

"Should prove very satisfactory to the group for whom it was written; the practical plater might have difficulty finding sufficient information to enable him to set up a complete cycle for plating a given product." *A. H. Pope.*

Electroplating, Aug. 1951, p.254. ⅔ col.

"Written for the trained metallurgist, engineer or chemist, who requires to know what electroplating involves and what it is capable of achieving, but not how to do it . . . As mere electroplaters, we are sorry that the authors have adopted the avoidance of detail as their ruling maxim. For others, who need only a vague insight into the electroplating processes, this book will no doubt be useful."

Morton, F. J. Burns. See **Burns Morton, F. J.**

Most, Harry, ed. Parasitic infections in man. 229p. 1951. Columbia Univ. Press, New York, $4.50.

American scientist, July 1951, p.494. ½ col.

"The papers of fourteen outstanding parasitologists, immunologists, and other experts in the field of parasitic infections are presented . . . The papers were originally presented at the Fourth Symposium of Microbiology sponsored by the New York Academy of Medicine."

Health news, July 1951, p.19. ⅞ col.

"A collection of papers presented at the Fourth Symposium of Microbiology sponsored by the New York Academy of Medicine . . . An assembly of quite diverse papers rather than a systematic public health approach to the control of parasitic diseases . . . The book is easy to read. Each chapter has a valuable list of references." *Robert Albrecht.*

Myrbäck, Karl. See **Sumner, James B., & Myrbäck, Karl, ed.**

Noll, Edward M. Color television. 45p. Paul H. Wendel Pub. Co., Inc., Indianapolis, $1 unbound.

Radio & television news, June 1951, p.143. ⅓ col.

"This 'notebook' on color television has been prepared especially for the experimenter, hobbyist, and television technician . . . The author has presented the fundamentals of the various proposed color systems in easy-to-understand language, illustrated by photographs and diagrams . . . With the current interest in color television, the appearance of this timely little book will undoubtedly be enthusiastically welcomed by television enthusiasts."

Noller, Carl R. Chemistry of organic compounds. 885p. 1951. Saunders, Philadelphia, $7.

Chemical age, Aug. 4, 1951, p.167. 1⅓ col.

"The scope . . . is quite wide, and in addition to the usual groundwork, there are chapters upon specific topics such as dyes, oils, fats and waxes, terpenes, heterocyclics, rubbers, organometallics, alkaloids, and steroids, but not vitamins, hormones or subjects of biochemical interest." *J. R. M.*

Chemical engineering, Aug. 1951, p.269. ½ col.

"By using two type sizes the book fills the needs of the average beginner as well as his more precocious brother. In standard type are printed methods of preparation, nomenclature, chemical reactions, uses of organic compounds—the clean outlines of the organic field. The novice can get his bearings before he has to pigeonhole a mass of details. But the details . . . are also there, in small type, for anyone who can assimilate them." *F. A.*

Othmer, Donald F. See **Encyclopedia of chemical technology.**

Parker, Harry. Simplified mechanics and strength of materials. 275p. 1951. Wiley, New York, $4.

American machinist, Aug. 20, 1951, p.202, 204. ⅓ col.

"For the ambitious shop man with limited training, the busy engineer who needs a quick refresher course on simple mechanics, and for the working mechanic who wants a ready reference on engineering information, this handbook-size text should be valuable."

Modern machine shop, Sept. 1951, p.312. ⅝ col.

"Written for use as a textbook in courses in mechanics and strength of materials and for use by practical men interested in mechanics and construction. Since it is elementary, the material has been arranged so that it may be used for home study. For those who have had previous training, it will serve as a refresher course in reviewing the most important of the basic principles of structural design."

Parker, Philip. Electronics. 1050p. 1950. E. Arnold, London, 50s. net.

Journal of scientific instruments, July 1951, p.223. 1⅛ col.

"It can be confidently expected that 'the Parker' will take its place alongside 'the Terman' as an indispensable book not only for students but also for electronic engineers, except those few who are already complete masters of their subject . . . Written in a [sic] uniformly lively style . . . The numerous exercises are worthy of special praise, and also the 23-page subject index, which makes the book an excellent work of reference." *D. Gabor.*

Proceedings of the Physical Society, July 1, 1951, *section A,* p.676. ⅜ p.

"Essays to cover a rather large field in considerable detail and on the whole must be credited as a very worthy attempt, particularly useful for the engineer who will be less inclined than the physicist to cavil at any fundamental inaccuracies . . . Mr. Parker has clearly read very widely including much of the original literature, but there are some notable omissions in certain fields . . . Will be of considerable value to many teaching and working in this field if it is read with reasonable discretion." *D. K. C. MacDonald.*

Partington, J. R. Advanced treatise on physical chemistry. v.2: Properties of

liquids. 448p. 1951. Longmans, New York, 50s. net.

Chemical age, Aug. 25, 1951, p.265. 1⅝ col.

"The author has obviously kept before him one guiding principle in deciding what to include and what to leave out—that the book should be of value primarily to the physical chemist at the bench, the experimentalist concerned with the progress of the science rather than to the theoretician or to the teacher." *R. C. P.*

Electrical review, Aug. 17, 1951, p.356. ½ col.

"Concerned with the general physical chemistry of the liquid state and deals with the theory of liquids, density, thermal expansion, compressibility, viscosity, thermal conductivity, surface tension, specific heat, vapour pressure, boiling point, latent heat of evaporation, and the critical state . . . Contains an almost overwhelmingly comprehensive collection of references to other literature." *R. P.*

Electrician, Aug. 17, 1951, p.484. ⅛ col.

Paul, Martin A. Principles of chemical thermodynamics. 740p. 1951. McGraw, New York, $7.50.

American scientist, July 1951, p.508. ¼ col.

" 'Intended to serve a course in chemical thermodynamics which may accompany or immediately follow the introductory course in physical chemistry, at either the senior undergraduate or the first-year graduate level'."

Chemical engineering, Sept. 1951, p.355-356, 358. 2⅛ col. including other reviews.

"Although . . . designed to extend the treatment of thermodynamics in elementary physical chemistry, the book can be used without prior knowledge in thermodynamics . . . Certainly a good reference." *Ju Chin Chu.*

Journal of the Franklin Institute, Sept. 1951, p.273. ⅔ p.

"In the opinion of the reviewer the book is not adequate as a text. It is entirely too long, and the explanations do not always seem adequate. It would seem more suitable as a review for someone who has studied the subject many years ago and wishes to read up on forgotten points and more recent developments. Some of the specific applications . . . are more suitable for the reviewer than for the beginner. The cost of the book is reasonable in view of its size." *N. W. McCready.*

Pearse, Arthur S. Emigration of animals from the sea. 210p. 1950. Sherwood Press, Box 855, Washington, D. C., $5.

Scientific monthly, July 1951, p.68. ⅝ col.

"Friends of A. S. Pearse will welcome this revised edition of his interesting account of the greatest migration of all times . . . Will serve more as supplemental reading for students of zoology than for the interested layman." *R. Tucker Abbott.*

Peatfield, A. E. Engineering components and materials. 240p. 1951. English Universities Press, London, 6s. net.

Mechanical world, June 22, 1951, p.585. ¼ col.

"The text is clearly written and will admirably serve its purpose of instructing the beginner . . . Should be useful in training departments."

Piganiol, Pierre. Acetylene; homologs and derivatives; translated by Frederick A. Hessel and John B. Rust. 356p. 1951. Mapleton House, Brooklyn, $10.

Chemical and engineering news, Aug. 27, 1951, p.3562. ⅜ col.

"The book is far from satisfactory either from the theoretical or the practical standpoint. The theoretical part is sketchy and immature. An industrial chemist can easily find many books where the industrial aspects of many subjects here discussed are treated in a more enlightening, and more thought provoking fashion. As a compilation of reactions involving acetylene, it is handled without the skill usually expected of an author of a text." *M. S. Kharasch.*

Chemical week, June 23, 1951, p.40. ⅛ col.

"Presents the basic principles of acetylene chemistry in addition to the newer Reppe acetylene chemistry. The author deals with details of industrial processes as well as theoretical aspects. Also covered here are problems of preparation, properties and reactions of acetylene—reactions include all those involving monologs and derivatives of acetylene as well as those of acetylene itself."

Pinckheard, J. Architectural design data for solid fuel. 64p. Coal Utilisation Joint Council, London, 7s. 6d. net.

Colliery guardian, Aug. 16, 1951, p.193. ⅜ col.

"Written for the Council . . . with the twofold object of providing architects with information on the storage of solid fuel in larger buildings and encouraging the incorporation of suitable facilities for delivery, storage and handling when new buildings are designed . . . Mr. Pinckheard points out that the book is not intended to provide the architect with a substitute for the specialist services of the consultant heating engineer . . . Profusely illustrated."

Pope, Alan. Basic wing and airfoil theory. 294p. 1951. McGraw, New York, $5.

American scientist, July 1951, p.510. ¼ col.

"The first book written on this subject for the college senior or first-year graduate student. The first two chapters review the principles of vector analysis and complex variables; the author then proceeds to more advanced information."

Prentiss, Augustin M. Civil defense in modern war. 429p. 1951. McGraw, New York, $6.

Electrical world, Sept. 10, 1951, p.238. ⅛ col.

"Organization for civil defense can only be affected [sic] if it recognizes the potentialities of atomic, bacterial and chemical assault upon the population from the air. This book reassesses the possibilities of massacre in these three 'A B C' approaches and thereafter portrays the air defenses which can ward them off to some extent."

Engineering news-record, July 12, 1951, p.43. ⅜ col.

"All the available information on the destructive effect of high-explosive bombs and atomic blasts is summarized in sufficient detail for civil defense work. There also are a few paragraphs on the hydrogen bomb."

Product engineering, Sept. 1951, p.286. ½ col.

"In this vitally important and timely book General Prentiss presents a program covering every major aspect of civil defense against atomic, bacterial and chemical warfare."

Textile world, Sept. 1951, p.216. ⅛ col.

"A fact-packed working text on the protection of civilian population against atomic, bacterial, and chemical warfare."

Read, John. Elementary textile design and fabric structure. Ed.2, revised and enlarged. 112p. 1950. Textile Institute, Manchester, England, 12s. 6d. net.

India-rubber journal, July 28, 1951, p.23. ½ col.

"Intended for the use of students in the elementary grades of fabric structure and textile design . . . Should be invaluable to students, serving both as an exercise-book as well as a textbook of fabric structure."

Richardson, Leon B., & Scarlett, A. J. Brief college chemistry. Revised edition. 470p. 1951. Holt, New York, $4.25.

Journal of chemical education, Aug. 1951, p.445. ⅜ col. including another review.

" 'Designed for introductory college courses in general chemistry where there is a restrictive limitation in the time assigned to the work.' Anyone who is teaching such a course should seriously consider this text . . . The book is not adequate for a course that attempts to cover the whole field of chemistry in a single course." *John B. Entrikin.*

Richardson, Leon B., & Scarlett, A. J. Laboratory manual for Brief college chemistry. Revised edition. 229p. 1951. Holt, New York, $2.

Journal of chemical education, Aug. 1951, p.445. ⅜ col. including another review.

"The proposed exercises are quite simple and would not require much time to perform. The instructor is expected to provide most of the directions for laboratory techniques. Each section of directions for experimentation is followed by a report section in which the student is expected to record his observations and to answer the questions." *John B. Entrikin.*

Rider, John F. Vacuum-tube voltmeters. Ed.2, revised by John F. Rider and Alfred W. Barber. 422p. 1951. J. F. Rider, New York, $4.50.

Electronics, July 1951, p.254, 256. ⅔ col.

"It is difficult to think of a single aspect of this particular instrument that has been neglected. The industry is fortunate in having a book available that can acquaint its engineers so thoroughly with one of their most valuable tools." *J. F.*

Industrial laboratories, July 1951, p.15. ⅓ col.

"Much more information than one would expect from the title alone is incorporated . . . A gold mine of exhaustive and authoritative instruction. Although full of highly technical facts, it is so simply written that anyone with basic electronics will clearly understand every page, a clarity of presentation for which much credit must be given to the author." *Fred Lichtgarn.*

Radio & television news, July 1951, p.72. ⅔ col.

"This volume which deals exclusively with a single piece of test equipment is, we believe, unique in the radio field. The widespread use of the v.t.v.m. in servicing not only makes this book practical but necessary . . . Suitable for homestudy, as a text book in technical schools, or as a reference work for engineering libraries."

Radio-electronics, Aug. 1951, p.97. ¼ col.

"New chapters are 'Probes for R.F. and D.C., Commercial Vacuum-Tube Voltmeters,' and 'Maintenance and Repair of Vacuum-Tube Voltmeters.' The latter chapter devotes 64 pages to this important subject, and amounts almost to a subsection of the book. The chapter on commercial meters . . . includes 49 pages of diagrams of commercial vacuum voltmeters . . . Closes with an extensive bibliography and an index, and questions for student use."

Roberts, Howard C. Mechanical measurements by electrical methods. Ed.2. 357p. 1951. Instruments Pub., Pittsburgh, $4.

Industrial laboratories, Aug. 1951, p.11. ½ col.

"The field covered is the use of electrical methods for measurement of various physical quantities such as dimension, pressure and temperature, as well as the multitude of specific problems coming under these general headings . . . Treatment is on a theoretical level and . . . there is no attempt to cover specific designs to meet specific needs." *N. J. B.*

Machinery (New York), Aug. 1951, p.242. ⅔ col.

"There are no major revisions in the present edition. Some of the devices shown in the first edition have been superseded by later models, but the basic principles are unchanged."

Ordnance, July-Aug. 1951, p.128. ⅔ col.

"Second edition of a handbook that is most useful, not only for laboratories, but also for any production plant where accurate methods of measurement are needed for difficult situations . . . Brings together for the first time in one volume clear and concise descriptions of the important known methods for taking physical measurements by inductance, capacitance, resistance, thermosensitivity, photostatic gaging, and acoustical methods." *George S. Brady.*

Tool engineer, July 1951, p.97. ⅛ col.

"Written for the purpose of providing a wider acquaintance with electrical gaging principles; particularly, to coordinate measuring methods developed by engineers in various fields . . . All subjects are clearly illustrated and the book as a whole provides a clear-cut approach to electrical gaging."

Robinson, Frank A. The vitamin B complex. 688p. 1951. Wiley, New York, $9.

Chemical week, June 30, 1951, p.36. 12 l.

"The author has made an intensive study of the vitamin B complex; he has evaluated the significance of each member vitamin itself and in relation to each other."

Robnett, Ronald H., and others. Accounting; a management approach. 570p. 1951. Irwin, Chicago, $7.35.

Accountants digest, June 1951, p.198. ⅜ col.

"Meets the needs of the business student who does not expect to become an accountant but must base his future business decisions on accounting data."

Rogers, Bruce A. Nature of metals. 248p. 1951. American Soc. for Metals, and Iowa State College Press, Ames, Iowa, $3.

Journal of the Franklin Institute, Aug. 1951, p.208. ⅔ p.

"The structure and behavior of metals and alloys are described . . . Deals principally with the changes which take place as a result of heat treatment and mechanical deformation . . . Not intended for professional metallurgists, but rather for those who for intellectual or practical reasons wish to increase their knowledge of the science of metals . . . This volume, although non-technical in nature, contains much useful information and should be of value to persons in fields other than metallurgy who wish to learn more of this interesting subject." *M. D. Earle.*

Rosenfeld, Leon. Theory of electrons. 119p. 1951. Interscience Publishers, New York, $2.25.

Canadian chemical processing, June 1951, p.488. 10 l.

"A revised and extended version of a course of lectures given by the author to advanced students in the Universities of Liège, Utrecht and Manchester. Its purpose is to provide a framework for an account of the electric, magnetic and optical properties of matter. There is no elementary treatment of the subject."

Nature, June 30, 1951, p.1044. ¾ col.

Science, Aug. 24, 1951, p.217. ¾ col.

"Presents the foundations of the classical atomistic theory of the electric, magnetic, and optical properties of matter in a clear, careful way . . . by assuming that the reader has a considerable background in physics and mathematics, including analytical mechanics, statistical mechanics, and Maxwell's theory of the electromagnetic field. A summary of tensor notation is provided in an appendix . . . Recommended, on both scientific and aesthetic grounds, to advanced students of physics and to those who teach them." *Hubert M. James.*

Rubin, Maurice. Practical electricity and magnetism. 356p. 1951. Chemical Pub., 212 Fifth Ave., New York, $7.50.

Heating, piping & air conditioning, Sept. 1951, p.238. ⅓ col.

"Included . . . is a chapter on electrical meters and measurements which covers such topics as the ammeter, use and principle of the shunt, the voltmeter and its connections, use and principle of the multiplier, potential drop, the wattmeter, resistance measurements, measurement of inductance, etc. In the other chapters, the author . . . discusses electrostatics, electric charges in motion, magnetism, photo-electric and thermionic emission, electrical conductivity of gases, practical applications (generators and motors), and recent developments in the field."

Modern machine shop, Sept. 1951, p.314. ½ col.

"Over 404 topics are discussed in this book with a simplicity and clarity that is said to make it an excellent source of information for any intelligent layman who has no technical background but who wishes to learn about these two prime movers . . . of our atomic age . . . Contains 281 excellent illustrations."

Russ, S., & Clark, L. H. Physics in medical radiology. Ed.2. 296p. 1950. Chapman & H., London, 25s. net.

Science progress, July 1951, p.556. ½ p.

"Provides the best introduction to the subject published in this country. Particular praise is merited by the revised section on photography and the new one on tracer technique . . . Can be strongly recommended to diploma candidates, medical radiologists and others interested in the subject." *F. L. H.*

Ryder, John D. Electronic fundamentals and applications. 806p. 1951. Prentice-Hall, New York, $9. (Prentice-Hall electrical engineering series.)

Electronics, Aug. 1951, p.286, 288. 1 col.

"Intended for instruction of senior and graduate students in engineering and physics who intend to make professional use of electronic techniques . . . Should prove a most helpful addition to the growing list of standard texts on electronic techniques." *D. G. F.*

Schell, Erwin H. Technique of administration. Ed.2. 363p. 1951. McGraw, New York, $4.50.

Modern industry, Aug. 15, 1951, p.121. 1 col.

"A delightful volume full of practical philosophy . . . Each chapter . . . closes with review and discussion sections, which are intended to be helpful in classrooms, since the first edition was extensively used in business-administration courses. Their inclusion should also be useful to the executive who will take the time to observe the maxim, 'Know thyself,' with Prof. Schell's recommendation as a measuring stick."

Schwenck, J. R., & Martin, R. M. Basic organic chemistry. 323p. 1951. Blakiston, Philadelphia, $4.50.

American scientist, July 1951, p.508. ⅓ col.

"This book will provide teachers and students with subject matter for a one-semester course, and will be welcomed particularly by students seeking a knowledge of chemistry 'as an adjunct and aid in the better understanding of their own major subjects in medicine, engineering, agriculture, home economics, and similar subjects'."

Science counselor, Sept. 1951, p.106. ½ col.

"Designed for a one-semester course such as might satisfy the needs of students planning to study engineering, agriculture, home economics, or some of the other professions that use organic chemistry as a tool. Within the limits they have set for themselves the authors have done a creditable job." *H. C. M.*

Schwitzer, M. K. Continuous processing of fats. 345p. 1951. L. Hill, London, 30s.

Canadian chemical processing, July 1951, p.570. ¼ col.

"An economic and technological survey of present trends in the vegetable and fish oils industry. While it is not intended to be a complete guide for the industry, it does record present developments and recent inventions, new trends and some new techniques which are attracting widespread interest."

Chemical engineering, Sept. 1951, p.352, 354. ⅔ col.

"American and European processes for treatment of fats and oils have been reviewed in some detail . . . Pictures and flowsheets are liberally found throughout . . . Some of the comments are inescapably tied to European

economics. An occasional discrepancy in American technology is also noted . . . Despite its Continental atmosphere, or perhaps because of it, this book would be a desirable addition to any fats and oils library." *G. W. M.*

Journal of the American Oil Chemists' Society, Aug. 1951, p.24. ⅔ col.

"This treatise emphasizes the trend of the industry toward continuous and mass processing and is valuable to all interested in oils and fats, such as economists, technologists, operators, managers, chemists, and students." *R. D. Oilar.*

Manufacturing chemist, Aug. 1951, p.327. 1⅓ col.

"Gives more than its title promises, for in it the author also deals with fatty acids, soaps and glycerin and discusses discontinuous processes . . . Everyone desiring a good insight into the processing of fats and related products should buy this well-illustrated, well-written and excellently produced book." *R. Rowe.*

Paint manufacture, Aug. 1951, p.304. ⅓ col.

"Covers every process from the production of the oil to the manufacture of the numerous products in the food and chemical industries. A review is given of the present-day world position with regard to the oil and fat industries."

Scott Blair, George W. Measurements of mind and matter. 116p. 1950. Dobson, London, 9s. 6d. net.

Nature, July 28, 1951, p.136. ½ col.

"Addressed to the non-specialist and the general reader, the latter of whom may find it rather a tough proposition; and its object is rather to give a wider currency to the fact that certain problems exist than to lay down solutions to them." *G. R. Noakes.*

Sherman, Henry C., & Lanford, C. S. Essentials of nutrition. Ed.3. 454p. 1951. Macmillan, New York, $4.25.

American journal of nursing, Aug. 1951, p.44 adv., 46 adv. ⅓ col.

"Nursing students will undoubtedly like to use this as a reference. It presents the up-to-date essentials of nutrition in a manner which is easy to understand." *Elmira Blecha.*

Cereal chemistry, July 1951, p.349. ⅔ p.

"Intended primarily for those who are being exposed to the science of nutrition for the first time. It constitutes a simple, logical treatment of the fundamentals of nutrition and 'assumes no prerequisite of training in science' . . . Emphasizing as it does the application of the science of nutrition to every day living, this book should provide a substantial contribution to the knowledge required by those who will be concerned with the maintenance of the health and efficiency of our community." *Irvin E. Liener.*

Journal of chemical education, Sept. 1951, p.502. ⅓ col.

"Although obviously designed as a text for use by classes, this book is useful as general literature and makes entertaining reading for anyone interested in health promotion by good nutrition . . . Includes the latest information on human nutritive requirements . . . The book is not concerned with technical information on the chemistry of food and nutrition. It does supply, however, the information required for intelligent selection of a good diet." *Philip H. Mitchell.*

Shubin, John A., & Madeheim, Huxley. Plant layout. 433p. 1951. Prentice-Hall, New York, $7.35.

Industrial laboratories, Aug. 1951, p.11. ¼ col.

"Written for the student of engineering and management, this book covers the principles, techniques and procedures for the selection and layout of plant facilities for highest efficiency and economy . . . Should be acceptable as a general text to introduce the engineering student to the problems of plant layout." *N. J. B.*

Simmons, Maitland P. The young scientist; activities for junior high students. 164p. 1951. Exposition Press, New York, $3.

Journal of chemical education, Aug. 1951, p.446. 12 l.

"A science activity text that will stimulate activity in the science classroom and the student's initiative . . . Mr. Simmons is known for his enthusiasm and creative work in the science classroom. This text will afford opportunities for the young scientists in the eighth and ninth grades to catch some of this enthusiasm and apply it to their own creative work. The questions stimulate the activities." *Greta Oppe.*

Science counselor, June 1951, p.61. ¼ col.

"Designed to supplement the usual textbook, it describes a large number of 'experiments' suitable for group demonstrations that can be performed before the class by pupils. Expensive apparatus and materials are not required. The description of each activity is prefaced by a list of questions that are to be answered before the demonstration is performed, and followed by others that encourage the pupil to make useful applications of the principle involved. The 35 illustrative line drawings add interest and clarity. There are 'Notes to The Teacher' and a glossary of science words." *H. C. M.*

Singer, Ferdinand L. Strength of materials. 469p. 1951. Harper, New York, $5.

Industrial laboratories, Sept. 1951, p.13. ⅓ col.

"This new text for students of engineering, by the author of one of the leading texts in engineering mechanics, is written with the same clarity that has characterized Dr. Singer's writings. Content is much the same as is found in other books in this field, but the succession of topics is exceptionally well designed to lead the student from the simple to the complex cases with a minimum of difficulty . . . Should be a useful text for engineering students." *N. J. B.*

Smiley, Dean F., & Gould, A. G. Your health. 555p. 1951. Macmillan, New York, $4.50.

American scientist, July 1951, p.504. ⅓ col.

"Contains information on personal health and on community life as well. It does not limit its discussion to problems of the college age alone but considers also problems of the whole life span from the seventeenth year through old age. Many useful details are given concerning health for the various organs of the body, for the mind, for people working in factories and living in the country, and for those past sixty years of age."

Sorenson, Harry A. Gas turbines. 460p. 1951. Ronald, New York, $6.50. (Series in mechanical engineering.)

Aero digest, June 1951, p.86. ⅛ col.

"Written as a one-semester course at the undergraduate level and assumes a knowledge of thermodynamics . . . Lavishly illustrated with an astute selection of references to the major professional works in the aviation field."

Combustion, Aug. 1951, p.66. ⅜ col.

"Intended for use in one or two-semester courses at the senior or graduate-school level. Its essential objective is to present a thorough and fundamental treatment of the thermodynamic principles, the elements of design, and the general construction features of the gas turbine."

Machine design, June 1951, p.204, 206. ⅝ col.

"The author has drawn upon his experiences with Pratt and Whitney on jet engine and gas turbine design to produce a work which combines theory with a practical approach. Knowledge of the elements of engineering thermodynamics is a prerequisite to certain portions of the discussion, but for the benefit of engineers who may be slightly rusty in this field a review chapter on basic principles is included."

U. S. air services, Aug. 1951, p.18. ½ col.

"Well-written and gives a very complete coverage of the subject. Special emphasis is given axial-flow compressors and turbines. The book appears to be free from typographical errors. The illustrations are well-chosen . . . Well suited as a reference book or as a college text."

Spottiswoode, Raymond. Film and its techniques. 516p. 1951. Univ. of California Press, Berkeley, Calif., $7.50.

American scientist, July 1951, p.498. ⅜ col.

"The story of the film—of how it starts, of its camera, cutting-room, library, laboratory, and production techniques, of sound and studio techniques—until it finally reaches the audience, after successive transformations and alterations."

Journal of the Society of Motion Picture and Television Engineers, June 1951, p.692. 1 col.

"Here is a book for which there has long been a need . . . Written by a film producer . . . and directed at the student or the worker in film production, this book goes surprisingly far into a basic technical understanding of such areas as the mechanics, chemistry, and optics of film making, without leaving the non-technical reader behind. It will be immediately adopted as a standard text in film production courses everywhere . . . Excellently illustrated . . . Very smoothly written . . . Contains an excellent 90-page glossary and a book list of almost a hundred volumes on various aspects of film, with a paragraph of evaluation for each." *Rudy Bretz.*

Statham, I. C. F. Coal mining. 564p. 1951. English Universities Press, London, 22s. 6d.

Geological magazine, July-Aug. 1951, p.302. ⅜ p.

"This excellently printed and profusely illustrated book on the applied science of coal-mining has the stamp of authority which one would expect from the eminent position held in the mining world by its author. The geologist who reads it with the idea of obtaining a comprehensive picture of the exploitation of Britain's greatest mineral asset will find a wide variety of subjects to interest him." *F. W. S.*

Mining electrical and mechanical engineer, Aug. 1951, p.72. ½ col.

"This new book on mining science was suggested by the Ministry of Fuel and Power to make available to the general public, and especially new entrants to the industry, a comprehensive and authoritative account of coalmining. No one is better qualified than Professor Statham to bring such an idea to fruition. In eighteen chapters he covers considerable ground . . . Admirably designed to meet the requirements of the new entrant."

Mining magazine, June 1951, p.350. ½ col.

"In covering such a vast field within a single volume the author has naturally had to be both clear and concise, but he has succeeded in completing a work that is both complete and easy to read . . . Can be recommended wholeheartedly to those anxious to know something of this important industry."

Stoever, Herman J. Engineering thermodynamics. 458p. 1951. Wiley, New York, $5.75.

Combustion, Aug. 1951, p.66. ⅜ col.

"Intended as a text for an introductory course in engineering thermodynamics by undergraduate students . . . Divided into three parts, the first two being concerned with the first and second laws of thermodynamics and the third with the application of the principles and methods treated in the first two parts."

Journal of the Franklin Institute, Aug. 1951, p.209. ½ p.

"Concerns the branch of thermodynamics of particular interest to the engineer, that is, only mechanical work, not electrical or magnetic, and only substances that remain chemically unchanged . . . A sound text for undergraduate instruction." *E. W. Hammer, jr.*

Refrigerating engineering, Aug. 1951, p.777. ½ col.

"Presents the principles of engineering thermodynamics together with some of the more important applications of these principles . . . Intended as a textbook for undergraduate students."

Sumner, James B., & Myrbäck, Karl, ed. The enzymes. v.1, pt.2. 725-1316p. 1951. Academic Press, New York, $12.80.

Journal of the American Pharmaceutical Association, scientific edition, Sept. 1951, p.477. ½ col.

"The high quality found in Volume I, Part 1, is maintained in this book, with the chapters being written by men well qualified by experience in their subjects. All sections are thoroughly referenced. The pages are numbered consecutively with Volume I, Part 1, and the index includes both parts of Volume I . . . A significant contribution to the literature on enzymes."

Soil science, July 1951, p.81. 11 l.

"Second of four parts of an encyclopedic presentation on the chemistry and mechanism of action of the enzymes. Included among the 26 contributors are scientists from England, Finland, France, Switzerland, and the United States. Reference is made to findings of some 5,000 workers in this field of research . . . The material is well presented. The authors and editors are to be congratulated on having done an exceptionally good job in assembling and presenting the material."

Swift, Ernest. Introductory quantitative analysis. 534p. 1951. Prentice-Hall, New York, $5.25 (Schools, $3.90). (Prentice-Hall chemistry series.)

Industrial laboratories, Aug. 1951, p.13. ½ col.

"Intended as a text for the standard course in quantitative analysis, the general material covered is very much the same as is found in other books in this field . . . Suitable for a course at the technical institute level or for students who need only a brief introduction to the subject." *N. J. B.*

Journal of chemical education, Aug. 1951, p.447. 1⅔ col.

"This book is excellent; the material has been carefully selected, logically organized, and presented in a clear, simple, and concise literary style . . . The author is to be congratulated upon the success he has attained in blending together the ever-increasing amount of theoretical principles demanded of quantitative chemistry today and the simplicity of presentation desired for the sophomore student." *Rex J. Robinson.*

Thoma, Kurt H. Oral pathology. Ed.3, revised and enlarged. 1592p. 1950. Mosby, St. Louis, $17.50.

Science, July 13, 1951, p.49. ⅔ col.

"The author presents the pathogenesis, diagnosis, histopathology, and treatment of anomalies, diseases, and tumors of the mouth and jaws . . . This book must be of particular value to the orthodontist as well as to the clinician, the oral pathologist, and the surgeon." *Joseph L. Bernier.*

Town, Harold C. Technology of the machine shop. 366p. 1951. Longmans, New York, 21s. net.

Mechanical world, June 22, 1951, p.585. ⅔ col.

"The descriptions and diagrams . . . are representative of the latest practice in mechanical, electrical and hydraulic operation of machine tools. Recent developments in cutting tools are covered and there is much information on diamond tools and cemented carbides. Automatic sizing and measurement during machining is fully described."

Treloar, Alan E. Biometric analysis; an introduction. 251p. 1951. Burgess, Minneapolis, $4.50.

Science, July 20, 1951, p.78. ⅓ col.

"Will be of limited interest and help to elementary students . . . Orients the reader toward the classic work of Karl Pearson. It will not satisfy either the student of mathematical statistics or the applied statistician with deep experimental interest." *F. M. Wadley.*

Turner, Francis J., & Verhoogen, Jean. Igneous and metamorphic petrology. 602p. 1951. McGraw, New York, $9.

Mines magazine, June 1951, p.56. ⅔ col.

"The authors present a unified discussion of the origin and evolution of rocks which are generally believed to have crystallized or been modified at high temperatures and pressures from the earth's surface to a depth of ten to twelve miles."

Van Ness, K., & van Westen, H. A. Aspects of the constitution of mineral oils. 508p. Elsevier Press, Inc., Houston, Tex., $9. (Advances in petroleum science series.)

Chemical week, June 9, 1951, p.36. 11 l.

"Reports the research results on the composition of petroleum, carried out at the Koninklijke/Shell-Laboratory in Amsterdam. The major section of the book deals with the method for structural group analysis—a simple procedure giving the composition of oil fractions in terms of carbon distribution and ring content."

Industrial chemist, July 1951, p.327. 1⅝ col.

"Invaluable not only to research workers interested in the petroleum field but to others concerned with development and processing. Apart from the detailed description of the methods of analysis to which half the book is devoted, numerous and complete references to the subjects covered are included and these are invaluable in themselves . . . Well written, carefully edited and well produced. The authors are to be congratulated on having written so interesting and helpful a book." *S. F. Birch.*

Wahlstrom, Ernest E. Optical crystallography. Ed.2, revised and enlarged. 247p. 1951. Wiley, New York, $4.50.

Economic geology, Aug. 1951, p.553. 10 l.

"The chief changes are general revisions and rewriting of many sections, an expanded and modernized list of references, an appendix on the Universal Stage, and redrawing of two-dimensional figures to three-dimensional illustrations in clinographic projection . . . The new edition is a considerable improvement over the first edition."

Journal of the American Pharmaceutical Association, scientific edition, Aug. 1951, p.418. ½ col.

"The author . . . has presented what appears to be sufficient basic information on crystallography to enable a student of the subject to acquire a sufficient understanding to apply it to practical problems such as those encountered in the analysis or identification of crystalline medicinal chemicals and other crystalline substances."

Weissberger, Arnold, ed. Distillation. 668p. 1951. Interscience Publishers, New York, $14. (Technique of organic chemistry, v.4.)

Chemical engineering, June 1951, p.270. ½ col.

"The theoretical scientist will find a wealth of information in the chapter on theory while the practical engineer will benefit from the chapters on fractional distillation, extractive and azeotropic distillation, high vacuum work, or sublimation." *F. C. Nachod.*

Chemical industries week, April 7, 1951, p.33. ⅓ col.

"Written by a group of experts in their respective fields, this book presents a thorough account of the theory and practice of batch distillation on a laboratory scale. The author of each section provides an explanation of the theory underlying the special type of distillation he is discussing, in addition to the laboratory apparatus and procedures employed, equipment performance, and typical industrial applications of the process. Various forms of distillation outlined are ordinary fractional distillation, extractive and azeotropic distillation, distillation of liquefied gases and low-boiling liquids and distillation under both moderate and high vacuum."

Industrial laboratories, Sept. 1951, p.14. ¾ col.

"A real contribution to the research chemist. Its high spot is the first chapter on theory, written by Arthur and Elizabeth Rose. It is excellent in coverage and in discussion of different theoretical approaches to the same problem . . . Although this book has a number of weak spots, it is by far the best single treatise on the subject and a worthwhile contribution to the literature." *N. J. B.*

Journal of the American Oil Chemists' Society, Aug. 1951, p.25. ½ col.

"This book is both a theoretical treatise and a working manual . . . The theoretical treatment of vapor-liquid equilibria and the discussions of the variables involved in the fractionating process of distillation are excellent. The book is enthusiastically recommended to those who are concerned with developmental work in this field." *A. W. Weitkamp.*

Welsh, R. J., & Waller, Geoffrey. Gas turbine manual. 243p. 1951. Temple Press, London, 25s. net.

Chartered marine engineer, Aug. 1951, p.10. ¼ p.

"Authoritative in every respect, written in technical but non-mathematical language, the book covers the history, fundamental theory and operational features of the various types of turbines . . . Intended to be equally suitable as a general textbook for the student or as a work of reference for the power plant engineer."

Engineering, Aug. 24, 1951, p.256. ¼ col.

"Serves a useful purpose, by dealing at some length with the general principles, in language that the non-specialist can readily follow, and giving short specifications of actual designs . . . Amply illustrated and the style of writing, in the main, suits the authors' approach to the subject."

Mechanical world, June 22, 1951, p.585. ½ col.

"Thirteen British-made industrial gas turbines are listed . . . and five British marine gas turbines; these are additional . . . to the many aircraft gas turbines. In comparison there are 16 Swiss, 11 American, 6 French, and one each of Danish, Dutch and Japanese manufacture, and all of them either industrial or marine. Of locomotives, powered by gas turbines there are throughout the world, a list of eight."

Power and works engineering, July 1951, p.226. ½ col.

"This book, with the exception of the closing paragraphs, is a reprint of the paper presented . . . to the Diesel Engine Users Association on November 18, 1948 . . . Despite the fact that some of the information given is, perhaps, not entirely up to date . . . it is entirely adequate in an introductory book of this kind."

Wertheim, Edgar. Textbook of organic chemistry. Ed.3. 958p. 1951. Blakiston, Philadelphia, $5.

Journal of the American Leather Chemists Association, Aug. 1951, p.463. ½ p.

"Primarily a textbook for a course in elementary organic chemistry, and is excellent for the purpose . . . The text is easy reading and clear. Subjects of general public interest are well selected . . . Not intended to be a reference work for the advanced organic student or specialist in the field." *R. H. T.*

Journal of the American Pharmaceutical Association, scientific edition, July 1951, p.362. ½ col.

"A comprehensive and interesting presentation of the subject of organic chemistry for the college student. Under proper guidance and limitation, it can serve as a text for pharmacy students and for chemistry-major students. The clarity of presentation, combined with a fine index, makes it especially useful as a refresher reference."

Science counselor, June 1951, p.61. ⅔ col.

"Those who are familiar with the second edition of this well known text will find the new one essentially unchanged in its general character. The author introduces . . . some of the modern ideas of theoretical organic chemistry, but does it with restraint." *H. H. Szmant.*

Whitehead, Stanley. Dielectric breakdown of solids. 271p. 1951. Oxford Univ. Press, London, 25s.

Electrical review, July 27, 1951, p.208. ¾ col.

"The book has something for the engineer concerned with the design or operation of electrical equipment, for the research worker and for the physicist interested in the solid state." *R. D.*

Whitmore, Frank C. Organic chemistry. Ed.2, revised. 1005p. 1951. Van Nostrand, New York, $12.

Chemical and engineering news, Aug. 13, 1951, p.3404, 3406. ⅔ col.

"Whitmore's 'Organic Chemistry' has been an important book from the first. It contains a wealth of material well organized for advanced study. This revised edition will continue to hold its place and will deservedly gain many new users." *Charles D. Hurd.*

Chemical engineering, Aug. 1951, p.268. ⅓ col.

"The committee of colleagues of the late 'Rocky' Whitmore . . . has done a fine job in bringing this standard reference work up-to-date. It is still designed as a one-volume reference text for those who have had at least one year of organic chemistry." *G. W. M.*

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